

13 (c) a phase change material disposed in said porous material in said cavity, said phase change material being operable in its entirety to absorb heat over time, and said phase change material changing from an initial phase to a final phase in response to the absorption of heat.

13 21. The apparatus of claim 1 wherein said phase change material is a wax.

14 17. The apparatus of claim 1 wherein said thermally conductive fibers are graphite.

7. The apparatus of claim 1 wherein said porous material is substantially homogeneously disposed within said cavity.

19. The apparatus of claim 7 wherein said thermally conductive fibers are graphite.

2. The apparatus of claim 1 wherein said initial phase of said phase change material is a solid phase and said final phase is a liquid phase.

22. The apparatus of claim 2 wherein said phase change material is a wax.

18. The apparatus of claim 2 wherein said thermally conductive fibers are graphite.

8. The apparatus of claim 2 wherein said porous material is substantially homogeneously disposed within said cavity.

20. The apparatus of claim 8 wherein said thermally conductive fibers are graphite.

25. **(Amended)** An apparatus comprising a heat sink which in its entirety is operable to effect over a period of time a net absorption of heat from externally thereof, said heat sink including:

an enclosure having a cavity therein, said enclosure having a highly thermally conductive portion;

a highly thermally conductive porous material disposed within said cavity and coupled physically and thermally to said highly thermally conductive portion of said enclosure, said porous material having voids therein; and

a phase change material provided within said cavity so as to be disposed within and substantially fill said voids in said porous material, said phase change material being operable in its entirety over a period of time to effect a net absorption of heat introduced thereinto through said highly conductive portion and said porous material, said phase change material changing in its entirety from a solid phase to a liquid phase in response to said absorption of heat by said phase change material.

26. The apparatus of claim 25, wherein said phase change material is free of substantial movement within said cavity.

27. The apparatus of claim 25, wherein said porous material includes a plurality of highly thermally conductive fibers.

28. **(Amended)** The apparatus of claim 25, wherein said portion of said enclosure includes a composite of highly thermally conductive fibers which are disposed in a matrix and which have portions extending from said matrix into said [chamber] cavity, said porous material including said portions of said fibers.

29. The apparatus of claim 25, wherein said portion of said enclosure is made of a metal, and wherein said porous material is made of a metal and is brazed to said portion of said enclosure.

30. (Amended) A method of operating a heat sink so that, over a period of time, said heat sink will in its entirety experience a net absorption of heat from externally thereof, said heat sink including an enclosure with a highly thermally conductive portion, a highly thermally conductive porous material which has voids therein, which is disposed within a cavity in said enclosure and which is coupled physically and thermally to said highly thermally conductive portion of said enclosure, and a phase change material which is provided within said cavity so as to be disposed within and substantially fill said voids in said porous material, said method including the steps of:

applying heat to said highly thermally conductive portion of said enclosure from externally of said enclosure;

transmitting heat through said highly thermally conductive portion of said enclosure and through said porous material to said phase change material;

causing said phase change material in its entirety to effect, over a period of time, a net absorption of heat introduced thereinto through said highly thermally conductive portion of said enclosure and said porous material ; and

causing said phase change material to change in its entirety from a solid phase to a liquid phase in response to said absorption of heat by said phase change material.

31. The method of claim 30, including the step of causing said phase change material to be substantially free of movement within said cavity.

REMARKS

Claims 25, 28, and 30 have been amended. Claims 1-2, 7-8, 17-22 and 25-31 are present in the application. Reconsideration of the application, as amended, is respectfully requested.